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TRANSACTIONS

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Revision of the Species of **TROX** of the United States.

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In the ninth and tenth parts of the *Coleopterologische Hefte* (Munich, 1872), Harold has published an elaborate monograph of the species of *Trox*, in which ninety-three species are fully described from the entire globe, fifteen remain unknown to him, of which seven belong to our fauna. With the view of endeavoring to supply the deficiency, as far as our species are concerned, as well as of making known to American students the results of Harold's studies, the following brief memoir has been prepared.

Our species may be separated into two groups, characterized as follows :

Scutellum hastate, that is, narrowed strongly near the base, the sides

at middle angulate; sides of thorax never setose.....GROUP I.

Scutellum oval, never hastate; sides of thorax in many species setose...GROUP II.

GROUP I.

The first group contains all the larger forms and may be divided into *winged* and *apterous* species. The latter have the elytra of oval form, the humeri broadly rounded and no humeral umbone; the metasternum is always very short and the rhomboidal space at its middle much broader than long. The winged species have oblong elytra, the humeri more abrupt and the umbone always distinct; the mesosternum is normal in form and the rhomboidal space at middle at least as long as wide.

The following table gives the other characters :

Elytra oval, body apterous, no humeral umbone..... **scutellaris.**

Elytra oblong, body winged, humeral umbone distinct.....**1.**

1. Elytra with rows of tubercles very distinct and tomentose..... **2.**

Elytra with rows of tubercles much less distinct, never tomentose... **3.**

2. First joint of antennæ with dark brown hairs; club dark.....**scabrosus**.
First joint with rufous hairs; club rufous or cinereous.....**4**.
4. Elytral tubercles round, their entire surface tomentose**monachus**.
Elytral tubercles oblong, the anterior portion of each glabrous.....**asper**.
3. Sides of thorax near the hind angles rather deeply incised; elytra not distinctly tuberculate.....**suberosus**.
Sides of thorax not or very feebly incised; elytra with well marked rows of glabrous tubercles.**punctatus**.

These species have a facies totally different from those of the next group arising principally from the form of the thorax as well as its sculpture. The base of the thorax here is always subpedunculate and consequently near the sides is always distant from the base of the elytra, the hind angles are always obtuse and the margin in front of them either with a well marked incisure or a feeble sinuation. These characters are entirely absent in the next group and even in those species in which the base of the thorax is deeply sinuous on each side (*Sonoræ*, *tuberculatus*, etc.) there is no space between the base of thorax and elytra, when in the normal position.

T. scutellaris, Say, Journ. Acad., 1823, p. 238; Lec. Proc. Acad., 1854, p. 214; Coleop. Kansas, pl. 1, fig. 4; *texanus*, Lec.; *suturalis*, Lec.; *umbonatus*, Lec. loc. cit., p. 214; Harold, Col. Hefte, ix., x. p. 56.

By the characters already mentioned this species may be readily known. The three synonyms above cited all indicate well marked varieties which appear to lead insensibly from one to the other.

Var. *texanus*, Lec.—The largest form. Elytra broadly oval and with rows of tubercles closely placed longitudinally, but with moderately well marked intervals between the rows. Sides of thorax near the base with a slight sinuation.

Var. *scutellaris*, Say.—Elytra rather less broadly oval. Tubercles more distinct, flatter, not confluent longitudinally but with well marked intervals between them and without any intervals between the rows. Sides of thorax entire.

Var. *suturalis*, Lec.—Tubercles more convex and exhibiting a tendency in the rows to alternate with larger and smaller tubercles, which are, however, closely placed longitudinally and laterally. Sides of thorax entire.

Var. *umbonatus*, Lec.—Elytra distinctly more oblong. Rows of tubercles decidedly alternating, the tubercles rather closely placed but of irregular polygonal form. Sides of thorax entire. The thoracic sculpture consists of four oval tubercles usually smooth and shining, placed along the basal margin, the central pair somewhat larger; in front of the outer basal tubercle is another of smaller size and less

regularly oval; in front of the median pair of tubercles an irregular figure resembling the letter "k," the vertical line being toward the middle and the bottom of the letter toward the front. This latter figure varies somewhat, but the sculpture as above described is that which is characteristic of the entire group. The space between these elevated portions is opaque and clothed with a cinereous or luteous indument, as is also the space between the elytral tubercles.

With the known variation of *punctatus* and *suberosus*, as shown by the large series before me, I cannot see that any of the above mentioned forms are entitled to rank as species.

Varies greatly in size. Length .60—.80 inch; 15—20 mm.

Occurs in Texas, New Mexico, Kansas and also in Mexico.

T. scabrosus, Beauv. Ins. p. 175, pl. 4b, fig. 4; Lec. Proc. Acad., 1854, p. 215; Harold, loc. cit. p. 100.

The surface of this species is almost always concealed by a brownish opaque coating. The thoracic sculpture is a modification of that described in *scutellaris*, having the basal tubercles more elongate and coated as the remainder of the surface; the "k"-shaped figure is also less distinctly marked. The sides of thorax are rather irregular and near the base deeply notched, the hind angle being in the form of a rounded lobe. The base of thorax is rather acutely lobed at middle. The elytra are oblong in form and with moderately elevated oblong tubercles having a tomentose summit. Between the rows of larger tubercles is a secondary series of smaller size and less elevation, also tomentose at top and on each side of these secondary tubercles a row of rounded granular elevations, while the surface between all these elevations is nearly smooth. The basal joint of the antennæ, the labrum and mandibles are clothed with stiff brown hair and the club of the antennæ is of sooty color.

The presence of the triple series of tubercles in this species affords an easier method of distinguishing it from the two following than the color of the hairs of the basal joint of the antennæ. The median tooth of the anterior tibiæ is also more distinct. Length .60—.70 inch; 15—18 mm.

This species occurs in nearly the entire region east of the Mississippi river and south of the lakes, but is much more abundant in the Gulf States.

T. monachus, Herbst, Käfer, iii. p. 25, pl. 21, fig. 7; Harold, loc. cit. p. 116; *tuberculatus* || Beauv. Ins. p. 175, pl. 4b, fig. 3; *pustulatus*, Lec. Proc. Acad. 1854, p. 215.

More oblong and of less robust facies than the preceding species. The thoracic sculpture is similar and the entire surface of body similarly invested. The notch near the hind angles is nearly as deep as in *scabrosus*, but the angular lobe less prominent, while the sinuation of the base immediately within the angle is much more pronounced. The elytral sculpture consists primarily of five series of tubercles (of which the sutural is smaller) of more or less oval form rather distantly placed and in each row alternating with the next, and at their summits tomentose. The spaces between the tubercles are finely but sparsely granulate. At the apical fourth of the elytra one of the tubercles of the third series is much larger, and on the fourth and fifth series a similarly enlarged tubercle but of less size than that of the third. This character is scarcely evident in *scabrosus* and much less distinct in *asper* than in the present species.

The hairs of the basal joint are very pale brown, and the antennal club rufous. Length .50—.64 inch.; 13—16 mm.

In very well preserved specimens it will be noticed that certain individuals have the spur of the anterior tibiæ straight, and others very distinctly arcuate near the tip. This appears to me to afford the means of distinguishing the sexes, the former being females and the latter males; as the spurs are almost always more or less worn the character becomes as useless for the determination of the sexes as is the knowledge acquired by its presence.

Occurs in the Southern States and also west of the Mississippi from Kansas to Texas.

T. asper, Lec. Proc. Acad. 1854, p. 215; Harold, loc. cit. p. 118.

The notch at the side of the thorax is less deep than in the preceding two, the angular lobe less prominent and the sinuation within it less marked than in *monachus*. The elytral tubercles are here elongate and closer together, and their summits tomentose except a glabrous space at the anterior portion of each. In the interval between the rows of large tubercles may be seen a row of small tubercles, on each side of which is a row of moderately deeply impressed punctures. The antennæ are similar to those of *monachus*, but the club is somewhat darker.

This species is somewhat smaller than the preceding, being rarely longer than .50 inch; 13—14 mm.

Occurs with the preceding.

The following species have the tubercles much less elevated, of oval

or rounded form and never tomentose at tip, but smooth and shining. The sculpture of both species is extremely variable, and has caused them to be unnecessarily divided.

T. suberosus, Fab. Syst. Ent. p. 31; Harold, loc. cit. p. 119; *crenatus*, Oliv. Ent. 1, 4, p. 7, pl. 1. fig. 4; Beauv. Ins. p. 176, pl. 4b, fig. 6; *denticulatus* ‡ Beauv. loc. cit. fig. 7, 8; *alternatus*, Say, Bost. Journ. 1, p. 179; *punctatus* ‡ Lec. Journ. Acad. 1854, p. 215.

This is the species so long known in our cabinets under the latter name.

The thoracic sculpture is similar to that of *monachus*, but the tubercles are much less elevated and less distinctly marked. The sides of thorax are rounded and the emargination in front of the hind angles broad and not nearly as deep as in *monachus*, etc. The elytral tubercles, even in the best marked specimens, are of but slight elevation, and between them are slight tomentose patches. The intervals are biserially punctured. There is scarcely any trace of subapical umbone. Length .40—.66 inch; 10—17 mm.

Varieties occur with scarcely any elytral tubercles, the only sculpture remaining being the punctures, and in which the surface coating is entirely absent so that the specimens are black and shining.

I have specimens before me from every section of our country excepting California and the region to the north. It occurs in the Peninsula of Lower California and thence southward to Patagonia.

T. punctatus, Germ. Ins. Spec. Nov. p. 113; Harold, loc. cit. p. 124; *morsus*, Lec. Proc. Acad. 1854, p. 216; var. *integer*, Lec., var. *tesselatus*, Lec. loc. cit.

The thoracic sculpture is much more distinctly marked than in any of the forms of the preceding species, and in fact approaches more nearly that of *scutellaris*, not only in form but also in the glabrous summits of the tubercles. The elytral tubercles are oval, moderately elevated, with tomentose space between them, and placed at a distance from each other greater than the size of the tubercles. The sculpture is of course somewhat variable and several varieties may be noted.

Var. *integer*, Lec.—Sides of thorax with scarcely any evidence of the notch near the hind angles. Elytral tubercles forming five principal series, between which are smaller tubercles not very evident, and the intervals slightly wrinkled.

Var. *morsus*, Lec.—Sides of thorax posteriorly feebly notched. Elytral sculpture similar to that of *integer*.

Var. *tesselatus*, Lec.—This is the larger form, and its general aspect resembles *scutellaris*. The sides of the thorax have a mere trace of

notch. The tubercles of the elytra are moderately elevated, smooth and shining and those of the secondary series are nearly as conspicuous as those of the primary.

As in *suberosus* the sub-apical umbone is reduced to a minimum.

The length varies from .48—.66 inch; 12—17 mm.

Occurs in the southern Atlantic and Gulf States, Kansas, New Mexico, Arizona, Peninsula California, California and Mexico.

GROUP II.

The species of this group are all smaller than those of the preceding, and some of them are even below the medium size. The variations of the thoracic sculpture will be noted in the remarks on the several species.

The tip of the prosternum behind the coxæ varies in form, and has been made use of by Harold with success in his synoptic table. The tip may be spiniform, sub-cariniform or entirely flat. The hind femora may have their upper posterior margin either spinulose or simple, and in accordance with the presence or absence of these characters the main subdivisions of the table are formed.

- | | |
|--|----------------------|
| Prosternum at tip spiniform; hind femora spinulose..... | 14. |
| Prosternum not spiniform, sometimes subcariniform or slightly prominent..... | 1. |
| 1. Hind femora spinulose along the posterior margin..... | 2. |
| Hind femora not spinulose..... | 3. |
| 2. Thorax with median sulcus limited on each side by an obtuse ridge..... | 4. |
| Thorax not sulcate; elytra not tuberculate..... | 15. |
| 4. Elytral tubercles with erect setæ; median sulcus usually entire. | |
| | tuberculatus. |
| Elytral tubercles squamulato-pilose; median sulcus usually interrupted..... | 5. |
| 5. Elytral margin strongly serrulate; tubercles cristiform, those of the second and third rows continuous at basal half..... | gemmulatus. |
| Elytral margin feebly serrulate; tubercles feebly elevated, usually nearly flat at the posterior declivity..... | Sonoræ. |
| 3. Elytral tubercles with black setæ..... | 6. |
| Elytral tubercles with rufous or pale hairs or scales..... | 7. |
| 6. Tubercles elevated, setæ erect, moderately long..... | erinaceus. |
| Tubercles scarcely evident, setæ very short..... | capillaris. |
| 7. Elytra with rows of tubercles or with patches of scales or setæ replacing them..... | 8. |
| Elytra without tubercles, surface with coarsely punctured striæ..... | 16. |
| 8. Elytra distinctly tuberculate; thorax with well marked ridges..... | 9. |
| Elytra not tuberculate, the tubercles replaced by patches of setæ..... | 10. |
| 9. Thorax sulcate at middle, the median ridges straight..... | 11. |
| Thorax bifoveate, the ridges very sinuous..... | 12. |
| 11. Elytral margin at base entire.... | unistriatus. |

- Elytral margin at base crenulate or serrulate..... **sordidus.**
 12. Tubercles of elytra with erect brownish setæ..... **foveicollis.**
 Tubercles squamulose, scales pale rufous..... **terrestris.**
 10. Anterior tibiæ above the lateral tooth simple..... **æqualis.**
 Anterior tibiæ above the lateral tooth serrulate..... **13.**
 13. Elytral intervals equal; pubescent spots small, round and distant; hind tarsi short, joints 2, 3, 4 not longer than wide..... **fascifer.**
 Elytral intervals slightly alternating, pubescent spots longer; hind tarsi with joints 2, 3, 4 distinctly longer than wide..... **scaber.**
 14. Elytral intervals with a single row of short erect setæ; anterior tibiæ bidentate externally and crenulate near the base..... **atrox.**
 15. Elytra black, shining, intervals flat with very slight elevations, each bearing a single short seta; hind tarsi slender..... **laticollis.**
 16. Elytra black, shining, intervals moderately convex, very sparsely punctulate and with sparsely placed, extremely short setæ; striæ coarsely punctured; anterior tibiæ feebly bidentate externally; hind tarsi rather short..... **striatus.**

The above table is considerably changed from that of Harold, although based on it. The first change that will be noticed is in the position of *erinaceus*. I have associated it with *capillaris* from the entirely dark, nearly black, scale-like hairs which tip the tubercles. All the following species have the hairs so much lighter in color that contrast in the table is better preserved by the change.

In order to avoid the use of characters drawn from the length of the hind tarsus as compared with the middle tibia, I have used the thoracic sculpture as a basis, and from it arrange the species in such sequence as appears the most natural from their general aspect. The gradual obliteration of thoracic, and change of elytral sculpture are thus shown. Of the last five species four were unknown to Harold.

T. tuberculatus, Degeer, Mém. Ins. iv., p. 318, pl. 19, fig. 2; Oliv. Ent 1, 4, p. 9, pl. 2, fig. 8; Hbst. Käf. iii., p. 23, pl. 21, fig. 6; Lec. Proc. Acad. 1854, p. 212; Harold, loc. cit. p. 155; *serrulatus*, Beauv. Ins. p. 176, pl. 4b, fig. 9; *canaliculatus*, Say, Long's Exped. App. ii., p. 278.

Form oblong. Clypeus rotundato-angulate. Head punctured, vested with four small tufts of hair sometimes forming a transverse continuous line. Antennæ rufous. Thorax narrower in front, sides moderately arcuate, base on each side moderately sinuate; median sulcus limited by an entire ridge on each side, rarely interrupted at middle by a transverse elevation. Elytra with rows of moderately distinct, feebly elevated, tubercles with brownish suberect scale-like hairs; intervals with much smaller tubercles. Prosternal process elevated in an obtuse ridge. Anterior tibiæ with one small marginal tooth and above it subserate. Posterior femora spinulose along the hind margin. Length .36—.40 inch; 9—10 mm.

Occurs from Pennsylvania to Arizona and Kansas.

T. gemmulatus, n. sp.

Oblong, moderately robust. Clypeus obtusely rounded, head coarsely punctured. Antennæ dark brown, club fuliginous. Thorax more than twice as wide as long, sides moderately arcuate, disc longitudinally sulcate, sulcus interrupted at middle. Sutural row of tubercles small, the others strongly elevated, each tubercle elongate, those of the second and third rows forming a continuous ridge at basal third, at summits with short, pale rufous scales. Elytral margin serrate in its entire extent. Prosternal process in form of an elongate tubercle. Hind femora spinulose posteriorly. Anterior tibiæ serrate at base, unidentate below the middle of the outer margin. Length .40—.44 inch; 10—11 mm.

The facies of this species is such that it never would be confounded either with *tuberculatus* or *Sonoræ*, being more robust, with broader thorax and with its tubercles strongly elevated, much more so, in fact, than in any species in our fauna.

Specimens have been sent me by Mr. H. Edwards, of San Francisco, collected at San Diego. This species has been long known to us under the above name in the cabinet of Dr. Leconte.

I cannot find that it has been described, and I retain the name under which we have known it to avoid confusion.

T. Sonoræ, Lec. Proc. Acad. 1854, p. 211; *alternans* || Lec. loc. cit. p. 212; *Lecontei*, Harold, loc. cit. p. 156.

This species closely resembles *tuberculatus*, and differs in having the elytral tubercles less elevated and covered with short, pale rufous scales. The intervals have smaller tubercles, less evident at middle and also a double row of punctures, and near each puncture two small granules. Elytral margin finely serrate. Prosternum, anterior tibiæ and posterior femora as in *tuberculatus*. Length .32—.40 inch; 8—10 mm.

I cannot find that *T. Sonoræ* differs at all from that which we have known as *alternans*, and therefore drop the latter name (being preoccupied) and also that which Harold has given in its stead.

Occurs in Kansas, Texas and Arizona and the adjoining regions of Mexico.

T. erinaceus, Lec. Proc. Acad. 1854, p. 212; Harold, loc. cit. p. 180.

This species resembles *tuberculatus* very closely but is rather more robust in form. The clypeus is more distinctly angulate at middle and the front with two setigerous spots. The median sulcus is feebly interrupted. The elytral tubercles are feebly elevated but clothed at summits with erect black setæ, the intervals have smaller tubercles

scarcely evident at the disc and small granules irregularly disposed. The prosternal process is slightly impressed at middle. The hind femora are mutic. Anterior tibiæ finely crenulate at base and with a small tooth slightly below the middle. Length .25—.28 inch; 6—7 mm.

Occurs in New Jersey, Illinois, Georgia, Indian Territory.

T. capillaris, Say, Journ. Acad. 1813, p. 238; Harris, Trans. Hartf. Soc. 1837, p. 77; Lec. Proc. Acad. 1854, p. 212; Harold, loc. cit. p. 170.

Oblong oval. Clypeus broadly arcuate. Sides of thorax feebly arcuate, gradually wider to base, median sulcus feeble but entire. Elytral tubercles feebly elevated, at summits tomentose with black, tubercles distant and small, intervals with smaller tubercles, scarcely evident at the sides, suture slightly elevated. Prosternum at tip slightly elevated. Anterior tibiæ unidentate externally and very feebly serrate. Length .36—.44 inch; 9—10 mm.

Occurs from Canada to Texas and Kansas.

T. unistriatus, Beauv. Ins. p. 175, pl. 4b, fig. 5; *porcatus*, Say, Journ. Acad. 1825, p. 193; Lec. Proc. Acad. 1854, p. 212; Harold, loc. cit. p. 173.

Elongate ovate. Clypeus rounded. Thorax transversely quadrate, sides feebly arcuate, hind angles rectangular, median sulcus feeble, entire. Lateral margin of elytra entire, tubercles very feebly elevated, elongate and biserially squammulato-pilose, intervals with very small pilose spots, and biserially punctured, punctures large but shallow. Antennæ rufous. Anterior tibiæ with obtuse marginal tooth and at base feebly serrate. Hind femora not spinulose. Length .40—.48 inch; 10—12 mm.

The form of this species is very nearly that of the preceding.

Occurs from Canada to Georgia.

T. sordidus, Lec. Proc. Acad. 1854, p. 211; Harold, loc. cit. p. 177.

This species recalls the form and aspect of *tuberculatus*. The median sulcus of the thorax is feebly interrupted and the costæ are sinuous, the hind angles are subacute. The elytral sculpture is nearly that of *tuberculatus*, but the scales at the summits of the tubercles are much paler. The elytral margin, especially at base, is serrulate. The tip of prosternum is an acute tubercle. The hind femora mutic. The anterior tibiæ above the marginal tooth finely serrulate. Hind tarsi shorter than the middle tibiæ, joints 2, 3, 4 longer than wide. Length .24—.32 inch; 6—8 mm.

Occurs from Canada to Georgia and Kansas.

T. foveicollis, Harold, loc. cit. p. 181.

Ovate. Clypeus at middle subangulate, head obtusely 4-tuberculate. Sides of thorax irregularly arcuate, base narrowed, disc with median ridges strongly sinuous, approximated at middle, united with a transverse ridge, dividing the sulcus into two foveæ, at base, on each side an elongate elevation joining the middle of the median ridges and enclosing a fovea, along the apex on each side a transverse fovea. Elytral tubercles moderately well developed and at their summits erect scale-like setæ, intervals with a very few smaller tubercles, punctato striate and somewhat rugulose. Prosternal process subacute. Anterior tibiæ with small marginal tooth near the angle. Hind femora mutic. Prosternal process in form of an acute tubercle. Length .20—.24 inch; 5—6 mm.

The middle and hind tibiæ have a slight tooth on the outer margin near the middle tipped with several short spinous hairs.

I have before me a specimen that purports to be typical, bearing the label in the writing of Harold, which does not, to my mind, agree with that author's description and in fact is merely a specimen of *terrestris* and which Dr. Leconte informs me was the subject of discussion at the time it was received by him from that author.

In their superficial aspect *foveicollis* and *terrestris* differ nearly as much as *erinaceus* and *sordidus*, for while the former in each case has erect scale-like setæ, the latter has short scales scarcely at all erect.

Occurs in Illinois, Missouri and Kansas.

T. terrestris, Say, Journ. Acad. 1825, p. 192; Lec. Proc. Acad. 1854, p. 212; Harold, loc. cit. p. 179.

This species and the preceding, as may be inferred from the above remarks, are very closely allied, and the only points of difference are that the tubercles in the present species have short scales, the sides of thorax less rounded, more decidedly convergent in front and scarcely at all narrowed at base. The large majority of the specimens are also smaller than those of the preceding species varying in length from .20—.24; 5—6 mm.

Occurs in New Jersey, Pennsylvania and the Gulf States, very rarely west of Ohio.

T. æqualis, Say, New Spec. Ins. Louisiana, p. 5, 1832; Am. Ent. edit. Lec. i., p. 301; Lec. Proc. Acad. 1854, p. 213; Harold, loc. cit. p. 185.

Form elongate sub-ovate. Clypeus rounded, head densely punctured and with a line of rufous setæ in form of an inverted "w." Sides of thorax moderately and equally arcuate, hind angles nearly rectangular,

dorsal sulcus very feebly impressed. Elytra punctato-striate, intervals feebly convex and with very feeble tubercles tipped with rufous scales in a double series. Prosternal process rarely in the form of an acute tubercle, usually longitudinally cariniform. Hind tarsi moderately long, the joints 2, 3, 4 longer than wide. Lateral tooth of anterior tibiæ very small, above which the tibiæ are simple. Length .24—.26 inch; 6—6.5 mm.

This species occurs from Canada to Louisiana.

T. fascifer, Lec. Proc. Acad. 1854, p. 213.

This species closely resembles the preceding. The thoracic sculpture is still more obliterated. The elytral tubercles are obliterated and their places supplied by small, round, very regularly placed patches of rufous scales. The hind tarsi are short. The anterior tibiæ bidenticulate externally and serrulate at base. Length .26 inch; 6.5 mm.

The patches of scales are of equal size on all the intervals.

Occurs in California.

T. scaber, Linn, Syst. Nat. edit. xii., p. 573; Harold, loc. cit. p. 183; *variolatus*, Mels. Proc. Acad. 1846, p. 138; Lec. Proc. Acad. 1854, p. 213.

Closely allied to *æqualis*. The thorax is similar in form and sculpture. The elytra have the intervals slightly alternating, the tubercles very feeble and tipped with rufous scales biserially arranged, the tubercles on the more convex intervals being more elongate and conspicuous than those of the alternate intervals. The hind tarsi are elongate. The anterior tibiæ bidenticulate near the tip on the outer margin and serrulate near the base. Length .20—.28 inch; 5—7 mm.

This species occurs in every quarter of the globe. In our own fauna it occurs from Canada to Texas. The European synonymy has been omitted for obvious reasons.

T. atrox, Lec. Proc. Acad. 1854, p. 214.

This species recalls in its outline *capillaris*, but is much less convex. Clypeus rounded. Thorax similar in form to *unistriatus*, sides moderately arcuate in front, slightly sinuate at base, hind angles acute, surface sparsely punctured, discal channel entirely obliterated excepting a slight impression in front of the scutellum. The elytra have broad shallow striæ, the edges of which are slightly raised and with transverse punctures not closely placed; the intervals are feebly convex and with a row of small punctures moderately closely placed, each bearing a short erect brownish hair. Hind tarsi elongate. Anterior

tibiæ bidentate externally the larger tooth median, one more basal smaller and with the margin near the base crenulate. Prosternal tip spiniform. Hind femora spinous along the posterior margin. Length .32 inch; 8 mm.

The prosternum of this species is distinctly spiniform in well preserved specimens, but in the type is scarcely less prominent than in *terrestris*, etc. Its aspect is that of the species with which it is placed, although the surface is entirely without coating as in the two following. It may at all times be known from any of our species by the uniseriate arrangement of the short spinulose hairs of the elytral intervals.

Specimens are known to me from Kansas and Illinois.

This species is evidently closely allied to *Eversmanni* of Europe.

T. laticollis, Lec. Proc. Acad. 1854, p. 213.

Form nearly that of *æqualis*, but very slightly broader. Surface black, shining. Clypeus rounded, head sparsely but moderately coarsely punctured. Thorax more than twice as wide as long, sides moderately arcuate and very feebly sinuate near the hind angles which are rectangular, surface shining, coarsely punctured, dorsal sulcus obliterated except a feeble ante-scutellar impression. Elytra black, shining, punctato-striate, intervals equal, nearly flat, with slight inequalities not amounting to tubercles, each bearing two or three short, erect brownish spiculæ placed in a transverse row. Prosternal tip feebly convex. Hind tarsi moderately long. Anterior tibiæ feebly tridenticulate on the outer edge. Length .26 inch; 6.5 mm.

The slight inequalities which, in this species, replace the elytral tubercles of others appear to be rather transverse folds and are moderately distantly placed. The appearance of this species is totally unlike anything in our fauna.

One specimen, New York.

T. striatus, Mels. Proc. Acad. 1846, p. 137; Lec. Proc. Acad. 1854, p. 213.

Black, shining. Sides of thorax feebly arcuate, posteriorly not sinuate, hind angles rectangular; disc moderately densely punctured, median sulcus obsolete. Elytra black, shining, deeply striate, striæ coarsely and moderately closely punctured, intervals convex and with fine punctures placed in pairs, which bear very short pale setæ. Hind tarsi rather short. Anterior tibiæ finely bidenticulate externally and serrulate at base, apical angular tooth deeply emarginate. Tip of prosternum in form of a short carina. Length .24 inch; 6 mm.

One specimen, Pennsylvania.